End Amended Specification Including Amendments Made Herein

[0005] These amendments are made without prejudice and are not to be construed as abandonment of the previously claimed subject matter or agreement with the Examiner's position. In accordance with the requirements of 37 C.F.R. § 1.121, a marked up version showing the changes to the claims, is attached herewith as Appendix A.

REMARKS

IDS

[0006] Applicants have submitted information in the IDS filed on 16 May 2001 for consideration by the Examiner. This information includes information available over the world-wide-web and for which a definite publication date has not be ascertained. Applicant has submitted a corrected form 1499 indicating dates presently ascertainable and requests that the Examiner consider these references.

Claim Status

[0007] Claims 1-21 remain pending in the application.

Double Patenting

[0008] A terminal disclaimer will be filed in the later filed case to overcome any outstanding double patenting rejections prior to issuance of the later-filed case.

Art Rejection

[0009] Claims 1-21 stand rejected under 35 USC 103a as unpatentable over CHENG '174 in combination with PULIZZI and/or EMM 96 and/or Chang. Applicant respectfully traverses.

The Invention

[0010] The present invention is directed to a power supply and related methods that are particularly suited to modern networking applications. A device according to the invention is designed for easy installation for controlling and power cycling network devices such as routers. Applicant does not attempt to claim all remotely activated power devices, but instead the particular combinations provided in the claims that make the invention a solution in providing remote power

cycling for networking devices, in particular because the invention provides control of a power cycling device through a standard network cable, including a cable carrying data signals.

Response to Rejection

[0011] The claims, as amended, are not anticipated or rendered obvious by controllable power supplies (such as discussed in the EMM reference) that teach a separate control cable is needed to control the power supply. The claims, as amended, also are not anticipated or rendered obvious by power supplies (such as discussed in Cheng) that teach that a separate control wire connection, with a separate socket, is needed to control the power supply. The claims, as amended, also are not rendered obvious by power supplies (such as shown in Pulizzi) that teach that data commands must enter the power supply and be processed by a microcontroller in order to control the operation of power outlets. The claims, as amended, also are not rendered obvious by devices (such as Change) that teach that a presence detection signal may be provided on a wire of a data cable and that power may be supplied from the device that also supplies the presence detection signal.

[0012] In fact, these references, teach away from the present invention in that the references each discuss a different solution to the problem of remotely affecting a power supply.

Chang U.S. 5991885

[0013] The patent discusses a *network* that detects the presence of a remote terminal and if the terminal is determined to be an infrared hub, the network device can provide power thereto. The patent indicates that a presence request signal is used in some configurations. (Col. 8: line 23-30.) The patent also indicated that this detection signal does not connect to used lines. (Col. 10: line 5-8.) Chang **does not** discuss sending a signal to a housing on an unused wire to turn power on or off and does not discuss a power supply per se, instead Chang discusses detecting the presence of a second device from a first device and supplying power to the second device from the first device. (See col. 3: line 19-37.)

[0014] Thus, there is no discussion or illustration in Chang of the limitations **"a first network socket ...able to receive a control signal transmitted over a wire of a network cable." Chang instead discusses that a detecting signal is sent over a network cable.**

[0015] Further, Chang does not teach or suggest the claim 1 limitations "control circuitry within said housing operatively connected with said first socket, and said power supply socket wherein power to said power supply socket is able to be turned on or off in response to said control signal received at said first socket." Instead, Chang teaches that any turning on or off of the power supply is done be the FIRST DEVICE, I.E. THE DEVICE THAT SENT THE DETECTION SIGNAL.

Cheng U.S. 5644174

[0016] The patent discuss a power sequencer, with further provisions for daisy chaining. CONTROL IN is described as a separately generated control signal that can also be used for daisy chaining. There is no illustration or discussion whatsoever anywhere in the reference of a network provided signal or standard network port being used for controlling operation. The CONTROL IN signal is not carried over a network cable that also carries data. The connection of the CONTROL IN signal is not a standard network connection. Further, the present invention does not discuss or teach daisy chaining, but instead teaches that each device is controlled separately and that any pass through socket is for passing through data signals, not passing through a control daisy-chain signal.

[0017] There is no discussion or illustration whatsoever in Cheng of the limitations "a first network socket located on a first of said distinguishable surfaces; wherein said first socket is able to receive a standard network cable connector and able to receive a control signal transmitted over a wire of a network cable;" provided in claim 1 or the limitation "wherein a network signal cable can be used to carry a control signal without generating unacceptable interference on said network cable;" of claim 13 or the limitations "a first network socket located on a first surface, said first socket connectable to a standard network cable; a second network socket located on said first surface, said second socket connectable to a standard network cable; a power supply socket located on a second surface; and control circuitry within said housing operatively connected with said first socket and said power supply socket wherein power to said power supply socket may be turned on or off in response to a control signal received over one wire of a standard network cable at said first socket while not interfering with network communication signals on different wires flowing between said first socket and said second socket." of claim 14. While Cheng does appear to discuss a control input socket 204, nothing in Cheng suggests that such a socket is a standard network socket or is

capable of carrying standard network data signals that are not interfered with by the control signals carried on the same cable. Thus each of the independent claims contain limitations not taught or discussed by Cheng.

EMM 96

[0018] Furthermore, none of the previously cited limitations are shown in any of the devices outlined in the EEM 1996 Pulizzi Engineering Inc. manual relied by the Examiner. While this manual does seem to discuss rack mounted power supplies, the manual does not teach any of the above limitations. **Therefore, Cheng and the EEM 96 catalog together do not even show all of the limitations of Applicant's claimed invention. Applicant therefore respectfully requests that the Examiner's rejection of all claims based on this combination be withdrawn.**

[0019] Because the catalog relied on by the Examiner did not specify in detail operation of the devices mentioned, Applicant has located additional information about these power supplies referenced by their model number and has submitted this additional information with the attached IDS. This additional information demonstrated that none of the cited power supplies use a standard network signal or network connection to control ON/OFF operation. These supplies, instead, require a separate signal to be run to the supplies from a computing device, especially for the purpose of remote operation. In some designs, this control signal, can be passed through the power supply to another power supply only to provide for a number of power supplies to be controlled by the same control signal in a daisy-chain or parallel fashion.

[0020] The present invention, in contrast, does not requires a separate control signal or cable to be run to the power supply control mechanism. Instead, the invention allows a standard network cable, using standard network connections and commands to be plugged into the power supply in order to control remote operation.

Pulizzi U.S. 5923103

[0021] In earlier responses, Applicant presented arguments traversing the combinations cited by the Examiner and did not admit that any rejections made by the Examiner were proper. The patent appears to be related to the Pulizzi Engineering products that the Examiner also cited and that have been addressed by the Applicant. The patent discusses a switched-output controller apparatus

with repeater function that includes a microcontroller 18 that can communicate with remote control signals through various sockets e.g. 142, 144, 160, 162.

[0022] As shown in the figure and discussed in the patent, all eight relays 60-74 are controlled by signals from the microcontroller 18 through a relay driver 24. The patent suggests that there is a command protocol for instructing microcontroller 18 in how to schedule switch operation of the outlets 40-54 through the relays. As shown in the figure and discussed in the patent, there is no direct operative connection between a signal line in any of sockets 142, 144, 160, 162 and the relays.

[0023] The patent discusses at length that communication to the relays is through an RJ232 connection that allows microcontroller 18 to receive signals FROM A MODEM. (See Col. 2: Lines 46-50 and Col. 8: Lines 34-58.)

[0024] The patent also discusses at length that if it is desired to control devices located at different locations, an RS485 or RS482 type network connection is made using a different set of RS11 connectors. RS422 and RS485 interfacing is known in the art as using a twisted-pair wire (i.e. 2 wires) for each signal (for example see www.kksystems.com/serdesc1.html). The main difference between RS422 and RS485 is as follows: RS422 has no tri-state capability (its driver is always enabled) and it is therefore usable only in point-to-point communications (although an RS422 device can act as a Master on a 4-wire RS485 system). RS485 has tri-state capability and can therefore be used in multidrop systems. RS422 is full-duplex, i.e. data can flow in both directions simultaneously - and often does. RS422 uses two separate twisted pairs. RS422 is often used simply for extending RS-232 cables. RS485 is half-duplex. It exists in two varieties: 2-wire (which uses a single twisted pair) and 4-wire (which uses two twisted pairs like RS422). RS485 systems are usually "Master/Slave"; each Slave device has a unique address and it responds only to a correctly addressed message (a "poll") from the Master. A Slave never initiates a dialogue. In a 2-wire system, all devices (including the Master) must have tri-state capability. In fact, it appears that a major advance claimed by Pulizzi is the need for, and presence of, TWO ENTIRELY DIFFERENT AND SEPARATE NETWORK CONNECTIONS for the device to operate (See Abstract, 2d to last sentence and elsewhere throughout.) In particular, Pulizzi discusses that prior systems had just

RS232 networks, which were limited to 200 foot operation (Col. 2: line 45 to Col. 3, line 63) and a major advance taught in the patent is use of two separate "in parallel" networks.

[0025] Thus, there is no discussion or illustration in Pulizzi of the limitations **"a first network socket located on a first of said distinguishable surfaces; wherein said first socket is able to receive a standard network cable connector and able to receive a control signal transmitted over a wire of a network cable; said network cable also carrying network communication signals over separate data wires;** " provided in claim 1. Pulizzi instead teaches away from the invention in that Pulizzi discusses that to control an outlet, communication must first be made to a microcontroller 18 through a modem connection vi RJ11 connectors. This does not teach or suggest a standard network connection that also carries data. Further Pulizzi discusses that communication with additional controlled outlets must be accomplished through an entirely separate master/slave device type communication through an RS232 or RS485 or RS422 type connection, with a further limitation that the devices cannot be more that 4,000 feet apart.

[0026] Further, Pulizzi does not teach or suggest the limitations "**wherein a network signal cable can be used to carry a control signal without generating unacceptable interference on said network cable comprising: placing a network socket on one surface of said housing, said network socket able to receive signals from a plurality of separate wires in a multiple wire network cable; "** of claim 13. As discussed above, Pulizzi teaches away in that it describes using a modem connection for connecting to the outside world and using a separate, master/slave device-type RS232 etc. type connection that does not otherwise carry any network data. Likewise, Pulizzi does not teach or suggest the limitations **"a first network socket located on a first surface, said first socket connectable to a standard network cable; a second network socket located on said first surface, said second socket connectable to a standard network cable; a power supply socket located on a second surface; and control circuitry within said housing operatively connected with said first socket and said power supply socket wherein power to said power supply socket may be turned on or off in response to a control signal received over one wire of a standard network cable at said first socket while not interfering with network communication signals on different wires flowing between said first socket and said second**

socket." of claim 14. Thus each of the independent claims contain limitations not taught or discussed by Pulizzi.

[0027] Furthermore, as discussed above, none of the previously cited limitations are shown in any of the references cited by the Examiner.

Response to Obviousness Rejection under 35 U.S.C. §103(a)

[0028] Claims 1-21 were rejected under 35 U.S.C. §103(a) as allegedly obvious in light of the cited references.

A) SEQ ID NOS: 9 and 10 (claims 1, 16, 18, 23, and 45-46).

[0029] With respect to claims 1, 16, 18, 23, and 45-46, in so far as they recite SEQ ID NOS 9 or 10, Applicants submit that Applicants invented the claimed invention before the publication date of the cited references. Upon an indication of otherwise allowable subject matter, Applicants will submit a declaration under 37 C.F.R. §1.131 swearing behind references N70546 and WO5407.

B) SEQ ID NOS: 4, 5, 6, 7, and 8 (claims 1, 6, 8, 10, 12, 14, 23, 45-46)

[0030] The Examiner is reminded that an obviousness rejection requires citation of a teaching or suggestion IN THE PRIOR ART to modify the references in the manner indicated by the Examiner. As stated by the Court of Appeals for the Federal Circuit:

> Our case law makes clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. **"Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight."** Id. [emphasis added] *Ecolochem, Inc. v Southern-California Edison Company,* __ USPQ2d ___ (Fed. Cir. 2000)

See also:

> The mere fact that the prior art may be modified in the manner suggested by the Examiner **does not** make the modification obvious **unless the prior art suggested the desirability of the modification.** [emphasis added] *In re Fritch*, 23 USPQ 2d 1780, 1783-1784 (Fed. Cir. 1992)

[0031] In making the *prima facie* rejection under §103(a), the Examiner has failed to establish, with particularity, why it was apparent to construct and/or operate a remotely controllable power supply as recited in the presently pending claims particularly when all of the references cited by the examiner suggest entirely different methods for affecting or controlling power to a device some distance from the supply. Simply alleging that because some ways were known for remotely affecting or detecting or controlling power to a networked device is not making specific findings why it was apparent to remotely control power to a device as recited in the pending claims.

[0032] As stated by the Federal Circuit:

> A critical step in analyzing the patentability of claims pursuant to section 103(a) **is casting the mind back to the time of invention**, to consider the thinking of one of ordinary skill in the art, **guided only by the prior art references and the then-accepted wisdom in the field**. *See Dembiczak* , 175 F.3d at 999, 50 USPQ2d at 1617 . **Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher**." Id. (*quoting W.L. Gore & Assocs., Inc. v. Garlock, Inc.* 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)). [emphasis added] (*In Re Werner Kotzab,* 217 F.3d 1365, 55 USPQ2d 1313, ____ (Fed. Cir. 2000)

[0033] In the instant case, lacking the teaching provided in the specification, there is nothing to lead one of ordinary skill to construct a power supply using the method of remote control as recited in the claims. The only "evidence" presented by the Examiner for such a motivation is the Examiner's assertion that "In this case, the examiner has provided motivations such as allowing use in standard rach mount network systems and allow remote power control without additional physical attachment as stated in the prior art rejections." However, the Examiner is here doing EXACTLY WHAT IS FORBIDDEN HIM BY THE FEDERAL CIRCUIT. The only motivation the Examiner provides for modifying and recombining the FOUR CITED references is to ACHIEVE THE EXACT ADVANTAGES DESCRIBED IN THE PRESENT APPLICATION AND ONLY PROVIDED BY APPLICANTS INVENTION. **The Examiner has provided NO EVIDENCE that either the PRIOR ART or the knowledge generally available to one of ordinary skill in the art at the time of the invention suggests the modification. The Examiner is instead using**

the advantages provided and suggested SOLELY BY THE INVENTION ITSELF to reject Applicants claims. This the Examiner is instructed, by both the court, and the MPEP, not to do. The Examiner is, in effect, taking the present inventors' own disclosure "as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight". The Examiner has cited nothing in the art or general knowledge art that would lead one of skill to produce the presently claimed devices and methods. Lacking such motivation, the Examiner has failed to make a *prima facie* case of obviousness and accordingly, the rejection of claims 1-21 under 35 U.S.C. §103(a) should be withdrawn.

[0034] Applicant has therefore addressed the Examiner's earlier rejections under 35 U.S.C. §103. In view of the foregoing, Applicant believes all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

[0035] If a telephone conference would expedite prosecution of this application, the Examiner is invited to contact the undersigned by telephone at (510) 769-3508 or email at sjl@quinelaw.com.

Dated: January 17, 2002

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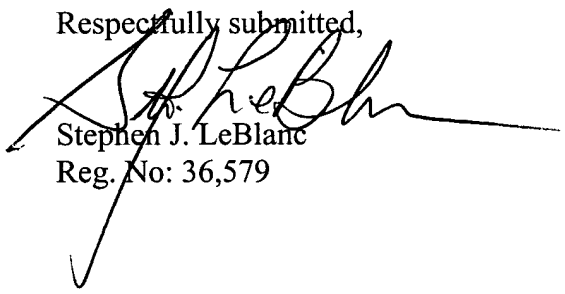
PATENT TRADEMARK OFFICE

Respectfully submitted,



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APPENDIX A

"Marked up" claims and specification illustrating the amendments made to 09/379411 with entry of this amendment, with added text underlined and deleted text struck through. The "|" mark outside the left margin indicates lines with text changes.

1. A controllable power supply for remotely controlling communication equipment comprising:
a housing having at least two distinguishable surfaces;
a first network socket located on a first of said distinguishable surfaces;
wherein said first socket is able to receive a standard network cable connector and able to receive a control signal transmitted over a wire of a network cable;
said network cable also carrying network communication signals over separate data wires;
a power supply socket located on a second of said distinguishable surfaces;
control circuitry within said housing operatively connected with said first socket, and said power supply socket wherein power to said power supply socket ~~may~~is able to be turned on or off directly in response to a state of said control signal received at said first socket without decoding digital data received in said control signal.

2. The device according to claim 1, further comprising:
a power line for connecting to an external power source.

3. The device according to claim 1, further comprising:
a second network socket wherein a network signal can pass over separate data wires from said control signal between said first socket and said second socket and have adequate required clearance without experiencing interference by said control circuitry and components of said power supply.

4. The device according to claim 1, further comprising:
an indicator light operatively connected to said control circuitry for indicating whether power to said power supply socket is turned on or off.

5. The device according to claim 1, wherein said control circuitry comprises a control relay.

6. The device according to claim 1 wherein said first and second distinguishable surfaces are parallel to each other.

7. The device according to claim 1 wherein said housing constitutes a box comprising six surfaces.

8. The device according to claim 7 wherein said housing comprises a top surface, a bottom surface, a front surface, a rear surface, a left surface, and a right surface.

9. The device according to claim 8, wherein said first network socket is located on said front surface and said power supply socket is located on said rear surface.

10. The device according to claim 8, further comprising:

a second network socket wherein a network signal can pass over separate data wires from said control signal between said first socket and said second socket and have adequate required clearance without experiencing interference by said control circuitry and components of said power supply; said first and second sockets forming a first pair of sockets and located on said front surface;

one or more additional pairs of network sockets located on said front surface, each pair receiving a control signal for a set of one or more power supply sockets located on said rear surface.

11. The device according to claim 9, wherein said top surface and said bottom surface are parallel planes between 1.5 and 2.0 inches apart.

12. The device according to claim 9, wherein said housing is mountable in a computer device rack and occupies only one rack unit.

13. A method of constructing a controllable power supply wherein sockets and control circuitry are ~~may be~~ contained within a housing having a constrained height and wherein a network cable can be used to carry a control signal without generating unacceptable interference on said network cable comprising:

placing a network socket on one surface of said housing, said network socket able to receive signals from a plurality of separate wires in a multiple wire network cable;

placing a power supply outlet on an opposite surface of said housing; and

placing control circuitry within said housing, said control circuitry operatively connected with said network socket and said power supply socket wherein power to said power supply socket ~~may~~is able to be turned on or off directly in response to state of a control signal received over a control signal wire of a network cable, said control signal wire separate from data carrying wires without decoding digital data received in said control signal.

14. A network device controllable power supply comprising:

a housing having at least two surfaces;

a first network socket located on a first surface, said first socket connectable to a standard network cable;

a second network socket located on said first surface, said second socket connectable to a standard network cable;

a power supply socket located on a second surface; and

control circuitry within said housing operatively connected with said first socket and said power supply socket wherein power to said power supply socket ~~may~~is able to be turned on or off directly in response to a control signal received over one wire of a standard network cable at said first socket while not interfering with network communication signals on different wires flowing between said first socket and said second socket and without decoding digital data received in said control signal.

15. The device according to claim 14 further comprising:

wherein said first and second network sockets are one pair of a plurality of paired network sockets on one surface, each pair associated with at least one controlled power supply socket on another surface and each pair passing between the pair networking communication signals; and

further wherein for each pair, on one of said pair, a control signal can be received, controlling said at least one power supply socket associated with said pair.

16. The device according to claim 14 wherein a network device is made controllable by:

attaching a network cable intended for said network device to a first network socket of a pair of network sockets;

attaching said network device to a second network socket of a pair of network sockets; and

connecting a power input of said network device to a power socket associated with said pair.

17. The device according to claim 14 wherein said control circuitry comprises a control relay.

18. The device according to claim 14 wherein said first and second distinguishable surfaces are parallel to each other.

19. The device according to claim 14 wherein said housing constitutes a box comprising six surfaces.

20. The device according to claim 18 wherein said top surface and said bottom surface are parallel planes between 1.5 and 2.0 inches apart.

21. The device according to claim 14 wherein said housing is mountable in a computer device rack occupying only one rack unit.